

Name: _____



Requirements	Passed
1. Explain the principles of the following: a) The 4 stroke Otto cycle of an internal combustion engine. b) The 2-stroke cycle of an internal combustion engine c) The method of ignition on a petrol and diesel internal combustion engine	
2. Explain at least 3 methods of fuelling a petrol/diesel internal combustion engine	
3. Explain the principles of an engine cooling system and the importance of using a coolant additive.	
4. Explain the principles of an engine lubrication system identifying key elements and their function.	
5. Explain 3 methods of engine induction and the role that an inter-cooler plays.	
6. Demonstrate that you are able to change a wheel taking the necessary safety precautions.	
7. Demonstrate that you are able to safely raise a vehicle for underside inspection and maintenance.	
8. Demonstrate that you are able to service a vehicle by changing the oil and renewing the oil, air, and fuel filters, and able to dispose of the used fluids in an environmentally safe way.	
9. Demonstrate that you are able to complete inspection of the following. a) The vehicle drive-chain. b) The braking system including the brake pads/shoes. c) The suspension system including the wheel bearings. d) The steering system. e) The vehicle tyres explaining possible causes of uneven tyre wear, f) The safety of the seat belts	
10. Do ONE of the following alternatives (A or B)	
A. Run a compression test on a petrol engine and log the compression of each of the cylinders. In the case of a low compression cylinder, demonstrate what method you would use to determine if the loss of compression is caused by a bad valve seat or worn cylinder bore/piston rings OR B. Using an OBDII Blue Tooth adapter and a mobile phone (Android) with the Torque mobile app loaded demonstrate that you can: a) Read ECU error codes if any. b) View and record various engine parameters.	

